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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,643

03/18/2004

Jac-Yeon Song

5000-1-546

5343

33942 7590 07/31/2007
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EXAMINER

NGUYEN, LONG P

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

07/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/803,643

Applicant(s)

SONG ET AL.

Examiner

Long P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: OMCC in line 5 of claim 1 recite "OMCC" which is not defined, the examiner will interpret OMCC as an address field. Appropriate correction is required.
2. Claims 5, 9, 15, and 21 objected to because of the following informalities: G.GPON.GTC is not defined in claim 5, 9, 15 and 21; the examiner will interpret the acronym as a "Frame". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
4. Claim 9 recites the limitation "one bit in an Ident field... OMCC flag field" in line 1-2 of claim 9. There is insufficient antecedent basis for this limitation in the claim. The examiner will interpret claim 9 as depending on claim 2.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 1, 4, 6-8, 10, 13-14, 16, and 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Constant Six et al. (US 2003/0219015).

As for claim 1 and 10, and 16, Constant Six shows (a) constructing a GPON Transmission Convergence (GTC) frame **[0035]** that includes a physical control block downstream (PCBD) portion **[0035, e.g. packet-HDR]** having an OMCC field including a destination identifier **(Figure 5, e.g. PLA)** information for supporting a GPON encapsulation method (GEM mode) **([0035], e.g. variable length packet)** and a payload portion including data **[0035]**; and (b) transmitting the GTC frame **[0038]**.

As for claim 4, 8, 14, and 20, Constant Six shows wherein an ONT ID is used as the destination identifier information **(Figure 6, e.g. ONU ID)**.

As for claim 6, Constant Six shows (a) constructing a GPON Transmission Convergence (GTC) frame that includes a physical control block downstream (PCBD) portion **[0035, e.g. ATM-HDR]** having an ONT management control channel (OMCC) field including a destination identifier information for supporting a ATM mode **[0034]**, and a payload portion including data **[0034]**; and (b) transmitting the GTC frame **[0038]**.

As for claim 7, 13 and 19, Constant Six shows wherein, when a mode of the ONT is Asynchronous Transfer Mode (ATM) **[0034]**, a virtual path identifier (VPI) and a virtual

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channel identifier (VCI) are used as the destination identifier information for supporting the ATM mode of the OMCC field **[0034]**.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 5, 9, 11, 15, 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Constant Six in view of Kim et al. (US 2004/0017823, Hereinafter, Kim).

As for claim 2, 11, and 17 constant six show the PCBd portion having an OMCC field but do not show a flag field for determining whether the field is inserted. However, Kim shows a flag field for determining whether the field is inserted **[0050]**. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the OMCC field of Constant Six with the flag of Kim in order to indicate additional overhead is added.

As for claim 5, 9, 15 and 21, Constant Six show the OMCC field but do not show wherein one bit in an Ident field defined by the G.GPON.GTC is used as the OMCC flag field. However, Kim shows a one-bit field **[0050]**. It would have been obvious to one of

ordinary skill in the art at the time of the invention to modify the OMCC field of constant six with one bit flag of Kim in order to reduce overhead.

9. Claims 3, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Constant Six in view of Yoon et al. (US 2004/0120326, Hereinafter, Yoon).

As for claim 3, 12, and 18 Constant Six shows a mode of the ONT is the GEM mode, but do not show a Port ID is used as the destination identifier information for supporting the GEM mode of the OMCC field. However, Yoon shows a Port ID is used as the destination identifier information in an optical network unit [0025]. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the GEM mode of constant six with the port ID of Yoon in order to transmit Ethernet frame through the network [0023].

Conclusion

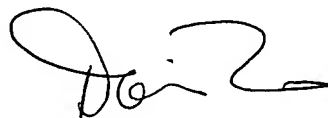
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long P. Nguyen whose telephone number is (571)-272-9740. The examiner can normally be reached on Monday - Thursday 7:30 - 5:00 EST Alternate F 7:30-4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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